



WILDLIFE MANAGEMENT AND RESEARCH NOTES

No.	AUTHOR:	DATE
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	TITLE: Waterfowl Banding	

Abstract: During 2009, 3,783 Canada geese (*Branta canadensis maxima*) and 1,212 wood ducks (*Aix sponsa*) were banded. 646 relocated Canada geese were also banded, with 152 also receiving plastic tarsal bands. The minimum banding goal for Canada geese was exceeded, as we approached the waterfowl program's goal of 5,000 per year by the 2009 field season. Banding efforts should continue as necessary tools in waterfowl management. Canada goose banding effort should be expanded to include as many relocated urban geese as is practicable.

History

The banding program carried out by the Indiana Division of Fish and Wildlife (IDFW) is a cooperative effort between IDFW, the US Fish and Wildlife Service (USFWS), and the US Geological Survey (USGS) through the Bird Banding Laboratory (BBL). The IDFW's goals have historically been to band 2,000 locally-breeding Canada geese (*Branta canadensis maxima*) each year, as well as 1,285 wood ducks (*Aix sponsa*).

Methods

Indiana Division of Fish and Wildlife (IDFW) biologists and assistants captured and banded resident waterfowl using funnel traps (geese) and baited traps (wood ducks). Canada geese were banded during their flightless period, which occurs during the last two weeks of June. Wood ducks were banded during July and August. All banding records were reported to the Bird Banding Laboratory (Laurel, Maryland) using BANDIT software. Wood duck banding occurred on four participating FWAs: Hovey Lake, Jasper-Pulaski, LaSalle, and Willow Slough. In addition, wood ducks were banded at Monroe and Mississinewa reservoirs.

Canada geese that were relocated from urban areas to FWAs were also banded with plastic tarsal bands. Orange bands were placed on adult birds, while white bands were placed on juvenile birds. These bands will help determine rates at which relocated urban birds return to urban areas.

Indiana no longer uses plastic neck collars on geese. Canada discontinued using collars on interior Canada geese after 2002, due to concerns that collars reduce survival. Collar data are only useful if the proportion of collars from different areas is known. This data quality issue, combined with survival concerns, leaves no reason for Indiana to continue an expensive collaring operation.

Results

A total of 3,783 Canada geese were banded on state and private properties in Indiana (Table 1). For all banded geese, the juvenile to adult age ratio was 0.47:1 and the male to female ratio was 0.93:1 (not including relocated birds). A total of 646 relocated Canada geese were banded, and 152 of those received colored plastic tarsal bands.

Staff at five Indiana FWAs and two reservoirs banded 1,212 wood ducks (Table 2). The juvenile to adult age ratio was 4.03:1, and the male to female ratio was 1.36:1.

Discussion

The minimum banding goal for Canada geese was exceeded in 2009. We continue to expand our banding goals to include more relocated geese. These birds are moved from urban areas to FWAs under authority of Indiana's Special Canada Goose Permit, issued by the US Fish and Wildlife Service. Banding more of these geese will allow us to better estimate harvest rates and the rates at which these birds return to urban areas. Overall, IDFW has attempted to band 5,000 Canada geese per year by the 2009 banding season. This goal will be reassessed before next season in an effort to more efficiently target effort toward areas where banding has not occurred in recent years.

While the age ratio (juvenile : adult) of Canada geese seems to be decreasing over time, this is likely an artifact of trapping locations. Trapping locations are chosen for their high densities of geese. This means that molt concentration areas may be banded in higher proportion than other habitats. Since these molt concentration areas attract failed breeders, nearly all of the birds using these areas are adult. This probably means that the age ratio of our banded sample of geese is not consistent with the age ratio of the overall population.

We nearly reached the federal sub-Flyway goal (1,285) for wood ducks banded in Indiana during this reporting period. Finding concentrations of adult birds continues to be a challenge, especially adult females. We are investigating the possibility of using cannon nets to trap wood ducks next year, by which means we will hopefully be able to more effectively capture birds in loafing areas.

In future years, duck banding crews will be supplied with bands and information needed to band any mallards, black ducks, and blue-winged teal (*Anas discors*) that are captured incidental to wood duck operations. The possibility of targeting these other ducks using cannon netting will be investigated.

Table 1. Canada geese banded in Indiana during this reporting period.

Age	Unknown Sex	Male	Female	Total
Adult	2	1,451	1,527	2,980
Juvenile	7	645	766	1,418
Unknown	0	0	0	0
Total	9	2,096	2,293	4,398

Table 2. Number of wood ducks banded at four Indiana Fish and Wildlife Areas and two reservoirs during this reporting period. The numbers in parentheses are the statewide quotas for that age and/or sex.

Age	Unknown Sex	Male	Female	Total
Adult	0	149 (218)	92 (312)	241
Juvenile	4	548 (314)	419 (441)	971
Unknown	0	0	0	0
Total	4	697	511	1,212



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